

## VASSAR COLLEGE

January 5, 1965

TO: Members of the College Community  
FROM: Faculty Science Club  
SUBJECT: Lecture on Computers by Theodor Nelson,  
Instructor in Sociology  
8:00 p.m. Wednesday, January 27 - The Aula

The Faculty Science Club is pleased to sponsor the talk described below for the benefit of all members of the College community interested in learning more about uses of the computer in the academic environment.

## COMPUTERS, CREATIVITY, AND THE NATURE OF THE WRITTEN WORD

No special background is necessary to understand this; indeed, "special" background may well be detrimental.

Everybody's misimpression of electronic computers -- a misimpression peculiarly acute among "computer people" -- continues to restrict the general use of computers to essentially numerical tasks. Inherently these machines have far broader capacities; the limits are not of technology, but of imagination.

This talk will first describe the structure and generality of the stored-program digital computer. The computer is NOT mathematical: if it is the most perfect adding machine, it is also the most perfect typewriter, electric train control, filing cabinet, movie projector, and musical instrument. But whole new attitudes will be needed, and liberal-arts personages will have to learn to program, before computers can make their real contribution to civilization.

The speaker will describe his own experiments in this direction -- trying to build "systems" for the handling of creative (and academic) materials -- ideas, words, and other things. A succession of approaches, and their increasing generality, will be explained.

The philosophic consequences of all this are very grave. Our concepts of "reading", "writing", and "book" fall apart, and we are challenged to design "hyperfiles" and write "hypertexts" that may have more teaching power than anything that could ever be printed on paper.

Please feel free to invite any interested students.

Sue Lumb, President  
Robert Rehwold, Vice-President  
Stanley Novak, Secretary

## Prof. Nelson Talk Analyzes P.R.I.D.E.

by Lauren Wedeles '66

In a lecture last Wednesday entitled "Computers, Creativity and the Nature of the Written Word," Theodor Nelson of the sociology department challenged the public to be receptive to new uses of computers, or, as he prefers to call them, "general purpose machines." The talk was anecdotal and humorous at times, but with an underlying seriousness and enthusiasm throughout.

Mr. Nelson described the constant improvements in size, cost, and speed of the machines. He explained some of the mechanics of the machines, which operate on patterns of sparks that conceivably can initiate a set of functions.

The languages of the computer, called macro-languages, are only limited in usefulness by the in-

genuity of the programmer. Programs can include words, pictures, printing, or strings of words. A cathode-ray display can be hooked to the computer and can present a visual picture of the programmed material.

The potential use of the computer in the creative process was the most important aspect of Mr. Nelson's lecture, particularly emphasizing the possibilities for the humanities. Using a personal anecdote, he reminded the audience of the problems of organizing material into a coherent piece of writing. As a new organization method Mr. Nelson has invented the PRIDE (Personalized Retrieval Indexing and Documentary Evolution) system.

In this system passages of material would be translated into machine language and filed in the machine in any sequence. With the proper instructions the machine would print out any sequence the writer wished to try, freeing him from the necessity of keeping the ideas in his head. Mr. Nelson pointed out that we often do not think in linear sequences but rather in "swirls" and in footnotes. He introduced the concept of the hyper-text, which would be a more flexible, more generalized, non-linear presentation of material on a particular subject.

The educational possibilities in the use of the hyper-text are vast. For example, it is possible that basic texts on a subject could be interindexed, so that the necessity and difficulty of tracing footnotes and rare sources would be eliminated. In this way the problems of information retrieval because of widespread writing today would be alleviated, making decisions in many fields easier.

In conclusion Mr. Nelson re-emphasized the importance for humanists of learning to program. It is possible that scholarly controversies will be documented and that even off-the-cuff remarks by professors on a topic will be recorded. He indicated the excitement in the experiments regarding the nature of the written word.